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## MERCANTILE AND AGRICULTURAL ECONOMICS

Improvement of agriculture has until recently involved only questions of farm technique. Better farming meant improved tillage and more scientific analysis of soils, a system of crop rotation, and the use of the latest improvements in farm machinery, and hence enlarged production. In brief, the whole conception of agriculture was that of a factory. The workers in this agricultural factory were all supposed to be skilled mechanics, that is, trained scientists. Generally speaking, "the workers were trained as horticulturists, soil chemists, or veterinarians, rather than as economists."<sup>1</sup>

This attitude has been radically changed in recent years. The concept of farming has been broadened to include the problems of marketing and the organization of the farm itself, and a new and specialized function has grown up under the name of farm management. Under these new conditions the farm is no longer merely a factory for increased production; it becomes in a true sense a business and takes on all the responsibilities of a business. The inevitable result is that farming is compared more and more with the manufacturing plant and the store. In order that these comparisons may be accurately made and that no false impressions be

<sup>1</sup> E. G. Nourse, "What Is Agricultural Economics?" *Journal of Political Economy* XXIV, 375.

created, it is important at this time that we examine the relationships between these types of business. The following discussion will therefore include the following main points: (1) Farming as a business, (2) the influence of mercantile economics in the organization of the farm business, (3) the assumed differences between mercantile and agricultural economics, (4) certain conclusions which develop from this analysis. The aim in view is to consider the growth of farm management, the borrowings which farm experts have made from business principles developed in mercantile and manufacturing enterprise, and the alleged essential differences between farming and manufacturing or merchandising. In this discussion the so-called business principles of manufacturing and merchandising will be included under the term "mercantile economics." Agricultural economics will mean the "application of business principles to the farm."

#### I. FARMING AS A BUSINESS

When a department of the federal government was created to take care of agricultural problems it naturally ran to scientific studies. In the first place the department was filled with those who were primarily interested in increased production and with those who had been trained in agricultural methods. As the department grew in importance and called to its service experts from various colleges its ranks were recruited from those who were soil experts, agricultural chemists, and animal husbandmen. This was right and proper, since the prime purpose of the department was to increase the output per farm, to adapt crops to soil conditions, and to preserve the fertility of the land. Other phases of agricultural problems were left to shift for themselves. In fact in the early period the most important problem of all was increased production.

When one turns to the writing on agricultural subjects he finds, also, a reflection of this emphasis on agricultural science. It was not until after the opening of the twentieth century that books began to appear on "economic" phases of agriculture. In 1905 there was published a book with the title *Agricultural Economics*, by H. C. Taylor. This book was clearly an attempt to carry over the established economic method of discussion into the agricultural field.

Much of the terminology of the older economic texts will be found in it. But there is also an attempt made to discuss farming from the point of view of business organization. Such topics as the size of the farm, market prices, principles of valuing land are taken up. This is in short an early appreciation of the fact that farming is something else than mere scientific agriculture. A few years later another book appeared, under the title *Readings on Rural Economics*, by T. N. Carver (1911). Here the author is revealed as an economist who is primarily interested in rural social problems; and the effect of an earlier theoretical discussion of the distribution of wealth can be seen in this book. There is here, however, some realization of the farm as something other than a place for the study of methods of production; it is likewise a place to live. These two books show the crystallization of the idea that a farm must have a manager who can understand more than the mere problems of production.

Within the last few years several other texts have been published, bearing directly on the subject of farm management. As early as 1902 there was begun in connection with the Minnesota Agricultural Experiment Station a series of studies in the cost of production on the farm. These studies enlisted the interest of the United States Department of Agriculture to such an extent that it shared half the expenses of the investigation. The results of these studies were published in 1911.<sup>1</sup> In 1907 a series of lectures was published under the title *Farm Management*.<sup>2</sup> The author of this book had realized clearly the phase of agriculture which had theretofore been left neglected. "To market a product advantageously," he wrote, "is as essential as to produce it economically. In short, business methods are as important as production methods."<sup>3</sup>

In response to this new demand the Department of Agriculture organized the Office of Farm Management and the Office of Markets and Rural Organization, and many special bulletins have been issued from time to time by these bureaus. The latter office has been especially interested in the co-operative movement among farmers.

<sup>1</sup> U.S. Dept. of Agr., Bureau of Plant Industry, *Bulletin* 232.

<sup>2</sup> By F. W. Card, Rhode Island Agricultural College.

<sup>3</sup> Preface, p. 5.

There was thus launched the new idea in agricultural economics. Farming was no longer merely producing more efficiently. Farming was a business, and the farmer was a business man as well as a scientist. "Farming is a business the same as banking or running a department store."<sup>1</sup> A distinct literature is growing up around this new subject of farm management. The primary purpose in the movement seems to be to carry into farming activities the principles which have been developed in other kinds of business. "Farm Management is the study of the business principles in farming. It may be defined as the science of the organization and management of a farm enterprise for the purpose of securing the greatest continuous profit."<sup>2</sup>

If farming becomes a business the farmer must take on the responsibilities of a business man. He must not only produce but he must also sell to advantage what he has produced. The two main points which he must henceforth consider are, first, what does it cost to produce these products, and, second, by selling at market prices, what profit is made on them?<sup>3</sup> The farmer thus becomes more fully commercialized. The farm and the farmer are necessarily less independent and less isolated than before. To his study of physical and biological sciences the farmer must now add the social science of economics. This entails a study of marketing, and a study of marketing focuses the attention upon price formation. But one cannot analyze prices without dealing in some way with profits, and profits in their turn demand for identification an accounting for and an itemizing of costs. As a natural consequence, therefore, there is at once a call for farm records, farm accounts, and all the data necessary for a determination and comparison of costs. The farmer must provide all these things if he is to meet successfully the problems of a business manager.

It is from the point of view of farm management that the business of farming must find comparison with mercantile and manufacturing establishments. Since this movement was a later development than urban business, it was only natural that a dis-

<sup>1</sup> E. H. Thompson, *Farmer's Bulletin* 311, p. 5.

<sup>2</sup> G. F. Warren, *Farm Management*, Preface, p. 5.

<sup>3</sup> Thompson, *Farmer's Bulletin* 511, p. 5.

tinctive influence should be carried over from the city to the country. It is now proposed to examine the borrowings by the new group of farm management experts from mercantile economics. This will be discussed under the three topics of terminology, principles, and methods.

## II. INFLUENCE OF MERCANTILE ECONOMICS

1. *In terminology.*—The group of men who first undertook the development of farm management were for the most part those who had come to the task as agricultural scientists. There were a few who had been trained as economists, but they devoted their attention primarily to general marketing problems. As a matter of fact there had been no means offered to gain instruction in business methods so that the experts in farm management could equip themselves for the new work. As scientists their attention had been devoted very largely to questions of production and only incidentally to selling problems. They understood soils, they knew the principles of agricultural chemistry, they had specialized in the raising of horses or of cattle or of poultry, but they had not been trained in principles of business management. The agricultural college curriculum a few years ago rarely included even a general course in elementary economics. It was far more rare to find a course devoted especially to agricultural economics; and even then it was only superficially agricultural.

With the development of the farm-management idea, however, courses of a new character were organized. These had to do with the farm as a business unit, and attempted to apply business principles to agricultural problems. When it became necessary for some part of these courses to be devoted to the keeping of farm records there was again no means offered to secure the necessary basis of accounting knowledge. The very best that could be obtained was entrance into a general course in elementary accounting. The books and forms studied in such courses were those which had developed from experience in industrial and mercantile enterprises. It was quite natural, therefore, that these business forms and methods should have a profound influence in the shaping of farm records and farm accounts.

It was necessary to gather material for these new courses in farm management from actual practice. Those who guided this new study used in general the inductive method, for there was no other basis upon which they could begin than the experience of farmers. In consequence they went from farm to farm endeavoring to ascertain how the business was conducted and with what results. As has been said by one writer on the subject of farm management, "the best way to determine the best methods of conducting the farm business is to learn how the most successful farmers have achieved their success."<sup>1</sup> This method of study very naturally led to the making of surveys. Typical farms were selected and the investigators, trained in agriculture and experienced in farm methods, went from place to place collecting data. If those who laid claim to being experts in farm management had been able to secure only meager business equipment the conditions of the individual farmer may be left to the imagination. It was found in most cases that no records of any kind were kept on the farm that were in any sense complete or reliable. Certain investigations were frankly based upon the facts given by farmers' wives who "kept no accounts except in their head."<sup>2</sup> In a method of this sort there is obviously a very great chance for bias in the facts, and such bias undoubtedly appeared. The agricultural investigators, however, have frequently declared that the facts obtained in this manner were remarkably accurate, as had been confirmed by certain checks which had been made upon the memory of those who gave the information. In any case a vast amount of valuable material was accumulated.

The methods of dealing with the facts thus secured by the various investigations were very largely borrowed from what has been called in this discussion mercantile economics. In the matter of terminology, for instance, the writers on farm management have taken over the language of the mercantile economist. The very term "management" is adopted from that source. The definition of farm management usually contains some reference to

<sup>1</sup> Warren, *Farm Management*, Preface, p. 5.

<sup>2</sup> Cf. "What the Farm Contributes Directly to the Farmer's Living," *Farmer's Bulletin* 635.

"business principles," which can only mean the methods of conducting mercantile and industrial enterprises. The farm from the point of view of farm management becomes a "business organization" and is discussed as such with reference to "efficient use of capital," "farm incomes," and "labor incomes." In the language of this new study the farmer becomes an "entrepreneur," a "business manager." There is also a discussion of "capital investment," of "fixed" and "circulating" capital. Part of the returns to the farmer is now called "wages of management." The records of the farm business are called "farm accounts" and correspond, of course, to the mercantile accounts. In this portion of the field there is also a direct borrowing from mercantile language. There is the question of "depreciation" and the need for making a careful "inventory," and there are the "debit" and "credit" accounts. This same influence is also revealed in the definition of farm management itself. "Farm Management includes the selection, planning, organization, and development of the farm and the daily and yearly conduct of the farm business." It may thus be seen that the language of mercantile economics has likewise become the language of this phase of agricultural economics.

2. *In principles.*—The influence of industrial and mercantile business, however, has been far more important than the mere contribution of terminology. It must be remembered that farm management is a study of business principles in farming. Some of these principles which have been taken over from urban business practice will be noted. For instance, in the matter of location, it is now well recognized that the problem of location is of great importance in the establishment of any industrial or mercantile enterprise. The business manager who contemplates a certain line of manufacturing should first analyze with great care the essential factors which determine the best location for his business. The importance of these different factors in location will naturally vary with the particular kinds of business, but the general principles are true for all types.

The principles of location have also been applied to the farm. Accordingly, detailed studies have been made of the determining

<sup>1</sup> U.S. Dept. Agr., Bureau of Plant Industry, *Bulletin* 236.

factors in selecting a desirable farm. It is true that these have not all been purely economic considerations. Other influences of very considerable importance have been permitted to enter, as will appear from a later discussion. An enumeration is, however, made of what have been called "factors of location." The two chief factors are said to be those of climate and soil fertility. Besides these general factors there are a number of subordinate ones, such as surroundings, rural telephone, transportation, market facilities, opportunities for schooling, church facilities, medical attendance, and social opportunities.<sup>1</sup> These factors have to do with the general environment of the farm. Besides these, a careful analysis is required of the farm itself. Such items as the following are to be considered: the farm layout, the lay of the land, the fertility of the soil, physical properties, drainage, water supply, improvements, healthfulness, taxes, roads.<sup>2</sup>

A survey of these factors of location will immediately show that they have an analogy in mercantile economics, in so far at least as they deal with the economic phases of the farm business. It makes no difference whether the business manager contemplates mining coal, copper, or iron ore, whether he considers undertaking the manufacture of shoes, clothing, or steel rails, or whether he expects to set up in business as a general merchant; there are factors of location which he must consider if he is to be successful. It is obvious, therefore, that the principles of business here are substantially the same for farm management as for industrial and mercantile management.

Take the problem of management itself. Business management may be defined in brief as the best combination of factors that will produce the highest continuous net profit. This means that a business must be kept well balanced. All parts of it must be adjusted so as to work harmoniously. Labor must be kept employed profitably at all times. The task of everyone employed should be adjusted so as to bring the right man into contact with the job for which he is best fitted. The manager must find the best use, or combination of uses, for his plant, whether it is a factory or

<sup>1</sup> Warren, *op. cit.*, chap. xviii.

<sup>2</sup> Card, *op. cit.*, chap. vi, pp. 56-62; Warren, *op. cit.*, chap. xix.

a store or a warehouse or a railroad. There is also a question of the main product in its relation to by-products. The large packers of meat have claimed that their profit arises from their use of by-products. The large manufacturers of steel have found a profitable use for slag. There are scores of instances where business managers have derived profit from by-products of their industry. It is a duty of the business manager to make the most of his opportunities in all these cases.

If one turns to the farm he finds that here again analogous problems of management arise. The farm manager has the task of determining the best combination of factors to produce the highest continuous net profit. He, too, must keep his farm business well balanced. There is for him the problem of keeping labor continuously and profitably employed. It is his duty to have work planned for the rainy day and for the off-season. He must make use of the by-products of the farm; he must adjust all the parts of his business so that they work together harmoniously; seasonal interstices must be filled up. These principles the farm-management leaders have been quick to learn from the experience of those engaged in mercantile enterprise.

The business manager, moreover, who is engaged in a mercantile enterprise has come to realize the importance of experience of past years, in all branches of his business, in order that he may lay his plans for the future. For this purpose he not only devised various methods of keeping accounts and records which should be of service to him in accuracy of detail, but he has also established his business policies for the guidance not only of himself but of all those who work with and for him. The manager of the farm is now being taught that he, likewise, must know his business. He, too, must keep accounts and records, and these accounts and records must be of such a character as to serve him for a guide in planning his business.

One thing needs to be said with the greatest emphasis and that is, that good accounting is the key to all successful administration, whether in farm, store, factory, or transportation company. This is a fact which farmers have been slower than other business men to accept. Good accounting means, of course, much more than mere keeping of cash accounts, or a record of receipts and expenditures. It means such a record as will enable the farmer to tell exactly at

the end of the year how much every part of the farm enterprise has cost him, how much it has brought him. By this means only will he be able to determine just where his losses have occurred and just where profits have been made. Until he knows this, he is in constant danger of one of the commonest mistakes, that of losing as much on one product as he makes on another.<sup>1</sup>

3. *In methods.*—Certain terminology, then, and certain principles have been taken over from industrial and mercantile economics by those who are leaders in the development of farm management. It may be further noted that in addition there are definite methods of calculation, also, which have been adopted. There is, for example, the farm income. This is generally defined as being the difference between receipts and expenses. The term "expenses" in this case means the actual expenditure during the given period for hired labor, for seed, for machinery, etc. This method of calculating income is precisely like that employed in any mercantile establishment. There is in the farm accounts, also, a method of drawing up debits and credits which is practically the same as for general business. It may be said that the accounting forms that have been devised for keeping records on the farm are almost entirely built upon mercantile usages. The method of taking inventory is likewise very much the same. The items which are to be credited to the farm are handled in the same way as they would be handled in any other kind of business. There is here a difference in detail which in some cases is of very great significance, but on the whole the methods are the same. One lesson in accounting which the farmers have learned thoroughly from mercantile practice is that of charging up the items of cost. Not only their labor charge and a charge for all actual direct expenditures are itemized, but there are also numerous incidental charges which are included, such as veterinary expenses, dues to farmer's associations, subscriptions for farm papers, and so forth.

Since the farm, although generally consisting of a small unit, is almost never a simple business, there has often been found a need for keeping separate accounts. Consequently, a single crop may have its own special set of records. This means, of course, the taking over into farm business of the general mercantile custom of

<sup>1</sup> Carver, *Principles of Rural Economics*, pp. 270-71.

departmentizing accounts. This practice is nothing more or less than the allocating of accounts.

This discussion has been carried far enough to show that the business of the farm is not so different from other kinds of business as to make it necessary to discover a complete system of new principles or methods. It seems fair to conclude that experience has shown that business is business, whether carried on in a factory, in a store, or on a farm, and that there is the same need for careful records, that the same terminology can be employed, and that the same methods of calculation can be adopted. There are differences to be sure, in many details, but the general experiences are the same. It now remains to take up the so-called essential differences between the farm as a business unit and the factory or store.

### III. MERCANTILE VERSUS AGRICULTURAL ECONOMICS

1. *Essential differences.*—The agricultural experts, however, have not depended wholly on the principles of mercantile business. While they have applied many of these where application was easily made, from the first they have claimed that there exist certain essential differences between the farm as a business and the store or factory. "All attempts," says one writer, "to apply city methods of bookkeeping to farm cost accounts must fail as they always have failed."<sup>1</sup>

One of the chief reasons why these differences have been claimed is that the business activities on the farm cannot be standardized in the same way that they are in other kinds of business. There is a difference, for instance, between machines in a factory and live stock on a farm, although both of these from a business point of view transform raw materials into finished products. Dairy experts are now accustomed to liken the milch cow to a machine. But, unlike the cow, the machine is never temperamental. Moreover, since the farm as a business is very complex, no matter how small it may be, there are usually, even on the specialized farms, many different kinds of activities with different ends in view. Even the smallest and the simplest farm units will have chickens, pigs, colts, calves, an orchard, and half a dozen different crops.

<sup>1</sup> Warren, *op. cit.*, p. 430.

This condition makes necessary a diversity of aim and practice unknown to other kinds of business. In these other kinds of business the plant is usually devoted to a particular service. However numerous and complicated the manufacturing processes, for example, they are all organized for a common composite result. This significance of purpose simplifies the organization and management. Under these conditions when the plant is equipped, when the machines are set up and started running, they remain very much the same day in and day out.

It may thus be seen that in any manufacturing plants or any mercantile establishments where these business activities are single in purpose and standardized in practice a comparison of results is made easy. Responsibility for output runs back finally to the man in charge of such plants or stores. That is, business managers may differ greatly in degree of efficiency, and the degree can be determined by a comparative study. Under standardized practice and conditions there is thus a check on managerial ability. This is not true, it is claimed, in regard to the farm manager. The farms are so different, the influences so varied, the factors determining results so uncontrollable, and the processes so unstandardized that no comparison is possible.

In the United States, as has been said, the farm has for its general unit the family; American farms are called "family-sized farms." This means that the energy of the entire family group is devoted to the various farm activities. Out of this condition there develops another essential difference between the farm and other types of business.<sup>1</sup> The family relationships are not the relationships of employer and employee. Work on the farm for the farm boys and the farm girls may have a far different aim in view from that of work in a factory or a store. There is in this farmwork an element of discipline which is entirely outside of economic relationships. There is, also, a process of informal training or a kind of apprenticeship connected with it. Furthermore, there is the question of the healthfulness of outdoor exercise and an element of social relationship which again take the work outside of mere economic calculations. In this respect, also, there is said

<sup>1</sup> Cf. B. H. Hibbard in *Hoard's Dairyman*, January 25, 1918, pp. 10-11.

to be a vital difference between agricultural economics and mercantile economics.

It has also been pointed out that the general problem of labor management on the farm is essentially different from that in other business. "The large area over which the operations must be conducted (there are some farms of 640 acres) makes it impossible to use factory methods."<sup>1</sup> This means that there can be no direct personal supervision over farm labor. It means, also, that farm-work is frequently interrupted by changing weather conditions, so that an entirely different kind of labor must be found at an instant's notice. It is also clear that there are no large groups of workmen on the farm to compare with those in factory or shop.

Another mistake, it is said, is made in comparing costs in industrial and mercantile establishments with costs on the farm, because the controlling factor in farm costs is the weather. "A mistake is made in comparing costs in mercantile establishments where the business is sheltered from the weather with business on the farm where the hazards of weather make the difference in costs."<sup>2</sup> The point is that the internal problems of the factory or the store, because they are shut off from the outdoor world by the four walls of the establishment, are essentially different in character from those on the farm that are open to all the changes of weather which are so important to farm production. It would probably not be claimed that the difference is so great between the farm and work in a shipyard, for example, which likewise cannot be protected from weather changes. Nevertheless, the essential difference is not in the interruption of labor by unfavorable weather conditions, but the fact that returns from labor in the one case depend upon favorable weather conditions, and in the other case upon direction of labor energy.

Such conditions as these have been emphasized by writers on the subject of farm management for the purpose of justifying certain fundamental differences between farming and other types of business, in calculating costs and in keeping accounts. It would not be difficult, of course, to show that there are just as complicated

<sup>1</sup> Warren, *op. cit.*, p. 596.

<sup>2</sup> Editorial in Hoard's *Dairyman*, February 8, 1918, p. 104.

accounting tasks in industrial and commercial life as those cited above. The question of joint costs in railroad accounting has long been the classic model of the Gordian knot for the accountant. In mercantile establishments, particularly, the cost problem has many intangible factors almost equal in difficulty with those on the farm. How much does it cost, for instance, to sell a shoe-string, or a bit of pink ribbon, or a hairpin, or even a hat or a dress in a large department store? The difficulty of the problem, however, should not be permitted to justify erroneous methods.

Some of these so-called essential differences need to be analyzed carefully in order to discover wherein the difference really lies and what consequences flow from differences in method. It is not possible to make a detailed analysis of each difference suggested. They will rather be classified under three main heads: (1) the farm as a home, (2) the calculation of the cost of raw materials at farm prices, and (3) the analysis of the farm income.

1. *The farm as a home.*—One of the main differences between the farm as a business unit and the factory or store is undoubtedly the relation of the home to the business. "The home and the business are so closely related on the farm that success depends to a large extent on the home."<sup>1</sup> The truth of this assertion will be readily admitted. The American farm should always have been primarily a home. All improvements on the farm, therefore, are likely to affect the home value, whatever their influence on production. It is possible to find many instances, which were more frequent in former years than now, of tradesmen who live in the rear of their stores and thus connect their home directly with their business. It cannot be said, however, that this is typical of commercial and industrial enterprise. The store and the factory usually are distinctly separated from the home. As the town grows there appear definite boundaries for the business section, for the factory district, and for the residential section.

Nevertheless, there is nothing in this difference between the city and the country to show any valid reason why these influences should not be carefully accounted for. There are in the city business many intangible factors to be recorded. The real estate

<sup>1</sup> Warren, *op. cit.*, p. 7.

companies are very careful to let these intangible factors appear in their accounts. As a matter of fact nearness to the business section or the factory district is a very large element in the valuation placed upon residential property. That these influences have worked differently in the city makes no difference in accounting principles. Unless the farm manager does disentangle these influences his management will be open to error. "Probably the greatest source of error and confusion in our farming accounts is to be found in the fact that the farm business and the farm home are not separate. This results frequently in burdening the former with the expenses which properly belong to the latter."<sup>1</sup>

It is admitted that any consideration of this relationship between the farm home and the farm business that will bring reliable results is extremely difficult. These are intangible values which cannot readily find expression in our common denominator of values. But it should not be forgotten that they are none the less real. Any system of record-keeping that is to represent the farm business fully and accurately must give them place. They correspond in a general way to a good location for urban business and to the good-will in mercantile activities. These intangible values are cared for in the system of records developed by mercantile economics. Sometimes the item of good-will attached to a trade-mark or a trade name reaches up into the millions of dollars. These intangible values have often been bought and sold in the market. In any case they have been accounted for in the books. They must be treated likewise on the farm.

An instance of this phase of the subject is "community improvements." The items included in this term are such things as roads, schools, churches, neighbors, general healthfulness, and even the "lay of the land." It is easily seen that such factors as these may not affect the productivity of the farm. Good roads may reduce the cost of hauling, but they also enlarge the living area for the farmer. The other items affect the farm very largely as being a place to live. The result which follows from this situation is that a farm may have a "trading value" which is different from its value as a business. "Sometimes land that has very little agricultural

<sup>1</sup> Nourse, *Agricultural Economics*, p. 377.

value has a trade value just as an old horse that is worthless for work has a trading value."<sup>1</sup>

It has been claimed by those who write on farm management that the difficulty of accounting for these intangible values does not need to be met unless the farm is to be sold.<sup>2</sup> Such an attitude is not scientific nor is it a satisfactory one. These values, however intangible, are assets and, as will be shown later, they do enter into the accounts in a way that makes them unreliable. It should be admitted that while it is difficult to disentangle personal accounts and farm accounts such a process is essential to clear and accurate accounting. Mere difficulty ought to be no legitimate obstacle to their careful consideration. It might easily be pointed out that they are not more difficult to handle than many nominal accounts in commercial and industrial business. But more important than anything else is the fact that they frequently find expression in the monetary values which are attached to the cultivated acres. It has been said, for example, that "these community improvements often represent a value of \$1,000 an acre."<sup>3</sup>

There is another reason why this alleged difference between the farm as a business and other kinds of business should be considered. "The farmer lives at his place of business and pays no cash rent for the use of his house, while the fields and groves are nearly as much a part of his residence as the rooms in the farm dwelling."<sup>4</sup> If, under these circumstances, the condition of the farmer be compared with the condition of the business man in the city the need for careful accounts of these values becomes apparent. It may be true that some of them can be measured only by the satisfaction they afford the owner of the farm. If they do enhance the value of the farm, however, they must appear clearly in the records.

From this relationship between the home and the farm there arises another item for consideration. It has been said that the American farm is a family-sized farm. Since this is true all members of the family are supposed to contribute in some way to the farm activity and to receive from the farm something in return. Here, again, if the condition of the farmer as a business man is

<sup>1</sup> Warren, *op. cit.*, p. 517.

<sup>2</sup> *Ibid.*, p. 485.

<sup>3</sup> *Ibid.*, p. 513.

<sup>4</sup> E. A. Goldenweiser, "The Farmer's Income," U.S. Dept. Agr., *Bulletin* 746, 1916.

compared with the condition of the business man in the city the fact that the farm affords work for the children in the household must be noted. This work may be so severe as to become detrimental; on the other hand it may be of such a character as to promote the welfare of the children and to secure for them those very things for which the city man must pay a high price. It is, of course, a question of fact in every case whether the work for children on the farm is detrimental or beneficial. Nevertheless, if the farm is charged with their labor the farm must likewise be credited with what it returns to them.

This leads to the consideration of what the farm furnishes in general to the household. As a natural resultant from the condition already described, i.e., the relationship between the home and the farm, there is need to analyze carefully not only what the family gives to the farm but also what the farm gives to the family. There has been a general saying that the farmer gets one-half of his living from the farm. This was a rough-and-ready estimate of the relationship just mentioned. Recent investigations, however, tend to show that the farm furnishes more than this amount of the farmer's living. "The farmer derives two-thirds of his food and fuel from the farm and pays no cash for them. When the value is placed on these items, it is wholesale value which is much less than the price paid for the same articles by city dwellers."<sup>1</sup> It is again a question of fact as to whether this produce, which the farmer gets directly from his farm, is in general superior or inferior to that which an average city dweller buys at the retail store. Some estimates have been made of the money valuation of this produce which the farm furnishes. These estimates vary considerably in amount. It has been said, for instance, that as much as \$500.00<sup>2</sup> would be required to furnish the same amount of foodstuff if bought in the city in small lots. This item has frequently been neglected by those who deal with farm accounts.<sup>3</sup> Such neglect is indefensible. There is a general human tendency by which the value of

<sup>1</sup> *Ibid.*

<sup>2</sup> Warren, *op. cit.*, p. 23; cf. pp. 24-25 for lower estimates.

<sup>3</sup> Thompson, "What Profits the Farmer Receives," *Annals* (November, 1913), p. 179; cf. also C. W. Funk, *Farmer's Bulletin* 635: general average, \$421.17, p. 5; house rents, \$125.10; bought \$173.91, p. 6, foodstuff is 62 per cent of what farm furnishes; house, 30 per cent; fuel, 8 per cent.

the produce is minimized by the farmer and overestimated by those who are compelled to purchase the produce at the retail store in the city. Farm accounts should determine finally and accurately what the conditions really are.

This question of the relationship between the home and the farm enters also into the land-tenure problem. If absentee landlordism increases there is likely to be less and less attention paid to the home qualities of the farm, unless a long-time tenancy system develops. Changes of this sort, whatever they are, should appear in the farm records. Careful accounting is even more important where the land owner becomes distinct from the farm manager and the farm laborer than where the manager-owner gains a large share of his livelihood from his farm. Fairness to all parties is necessary in the bargaining between tenant and landlord.

There is still another feature of the relationship between the farm as a business and the farm as a home which needs to be noted. Man is like a tree in that he takes root to the spot where he has lived for a long time. Sentiment attaches to all his surroundings. When a man has brought a farm under cultivation he may find a peculiar attraction in field and grove which will enhance the value of the place to him. The time comes when he will not willingly exchange this place for another in which to live. "The farmer's location is generally permanent. Every beauty or convenience which he adds to his home are for him and his. Home comes to mean something to him and his children. Each improvement in buildings or equipment means far more than the possible profit which the change may afford."<sup>1</sup> Added to this, is the fact that moderately good judgment and reasonable enterprise will practically insure a farmer, who is not too heavily burdened with debt, against want in the days when his labor is no longer productive. "An intelligent and industrious farmer need look upon the future with no apprehension, except as the result of some unusual misfortune. . . . His support is secured to the end of his days. Even when he is no longer able to work himself, his farm will continue to yield him comforts of life."<sup>2</sup> Among these comforts of life there

<sup>1</sup> Card, *Farm Management*, p. 108.

<sup>2</sup>*Ibid.*, p. 95.

is this element of sentimental attachment which cannot be overlooked. If accurate records are to be kept on the farm, some way or other, no matter how difficult the task may be, this condition must appear in the accounts. Some kind of personal accounts must be set up for it. In any case it will appear in the accounts clearly defined or disguised in land value, depending upon whether or not an attempt has been made to give it separate valuation. Especially if any comparison is made between the farm as a business and commercial and industrial enterprises of the city must this item be determined.

2. *Calculating costs on the basis of farm prices.*—There is said to be another essential difference between the farm as a business and the factory and store. This appears in the principles of farm accounting as taught by the leaders in farm management and the principles of accounting established in mercantile economics. This difference has to do with the keeping of cost accounts on the farm where feedstuff is grown for live stock or for dairy herds. It is far more significant than a mere difference of method. There is a direct clash of opinion on a matter of fundamental importance.

For some part of the way in cost accounting the farm accountant walks side by side with the mercantile accountant. The purpose of cost accounts, for example, in both cases is professedly the same. "Since the object of cost accounting," says one writer on farm management, "is to help in studying one's business, it is evident that the interpretation of the results is the most important part of the work."<sup>1</sup> This statement means in the language of the mercantile accountant that the cost accounts have for their ultimate purpose an intelligent control of the business. This unity of purpose is given expression by the same writer when he says, "Men are now beginning to keep careful cost accounts and other records of industrial affairs of the business for the purpose of learning how to conduct the business more efficiently."<sup>2</sup> There is also a general agreement as to the advisability of keeping accounts for different activities clearly separated. And not only in purpose are farm

<sup>1</sup> Warren, *op. cit.*, p. 443.

<sup>2</sup> *Ibid.*, p. 428; cf. Card, *op. cit.*, p. 145; Carver, *Principles of Rural Economics*, pp. 270-71.

accountants and mercantile accounts agreed, but they are also willing to use similiar forms.

And yet, although the purposes and these superficial characteristics of form and method are in harmony, there is a direct issue on principle. The agricultural economists have gone dead against mercantile and industrial practice in the matter of charging raw materials. It is clear that this question becomes a matter of very considerable importance when it comes to a comparison between the farm as a business unit and the store or factory.

The theory held by mercantile accountants for taking care of raw materials is compactly stated by Montgomery in *Auditing Theory and Practice*, "The basis of value should be cost or market, whichever is the lower" (p. 24). This principle is endorsed by all reputable accountants and is almost the universal practice.<sup>1</sup> The reason which is offered for this principle of accounting is that the object of accounts is to know one's business for the purpose of better control. As one writer on farm management has declared, "No method is scientific that fails to count the cost."<sup>2</sup> If it be granted that a knowledge of costs is a kind of knowledge that is essential for the best management, then it must follow by the very meaning of the word that there should be determined the actual cost of material. It is also evident that an accurate judgment of how to dispose of the finished product cannot be secured without an exact knowledge of actual costs. "The cost of the finished product is the accumulated cost of the materials and labor that have entered into it. Unless you ascertain cost in this way, it is impossible to know the profit of any business."<sup>3</sup> In a mercantile establishment this same principle comes to the front in the case of making inventory. The merchant cannot know the actual status of the business without this principle.

Contrary to this practice in mercantile and industrial enterprises, the agricultural economists have held to a farm-value theory.

<sup>1</sup> Nicholson, *Cost Accounting Theory and Practice*, p. 24; Dicksee, *Accounting*, pp. 172-73; Esquerre, *Applied Theory of Accounts*, p. 171; Hatfield, *Modern Accounting*, p. 102; Gilman, *Principles of Accounting*, p. 60; Eddis and Tindall, *Manufacturer's Accounts*, p. 4.

<sup>2</sup> Warren, *Farm Management*, p. 158.

<sup>3</sup> Evidence in Chicago Milk Inquiry, p. 5521.

According to this theory the feedstuff grown on the farm is considered as a finished product in itself, "completely marketable," although it may be fed to live stock or dairy cows. The principle is stated as follows by a writer on farm management: "The cost of feed is a factor in the maintenance of live stock. Where the feeds grown on the farm are fed to the live stock, they should be charged at the farm price. The farm price is the market price at the nearest regular market, less the cost of delivering it to the market."<sup>1</sup>

Here a question of principle is clearly involved. The mercantile practice of charging raw materials at cost value has been called by one agricultural economist "a foolish practice" when applied to the farm.<sup>2</sup> Since, however, the principle in mercantile enterprise has developed from many years of experience and since it has received such wide endorsement, it is only fair to put the burden on the agricultural economists to show good reason for its rejection in farm accounts. A reason has, indeed, been offered in justification of this difference in practice. The raw materials on the farm, that is, feedstuffs, such as corn and hay, are said to be readily marketable. This means that a farm differing essentially from a factory or a store has a ready alternative use for its raw materials so that the raw products of today may, without change, become the finished products of tomorrow. This simply means that a farmer after he has produced a crop of corn may decide to sell his corn to the market rather than to his live stock. The mercantile principle, on the other hand, says that in the case of a dairy farm, for example, the feedstuffs on the farm, as well as those bought in the market, are the raw materials to be used in the manufacture of milk. Logic and consistent accounting practice would compell in this case, as in mercantile and industrial accounts, the application of the cost value.

<sup>1</sup> Boss, *Farm Management*, p. 171; cf. Warren, *op. cit.*, p. 45; Evidence before New York Commission; Nourse, *Agricultural Economics*, p. 376; C. E. Ladd, *System of Cost Accounts*, and *Farmer's Bulletin* 572, p. 3. The principle in this government report was taken from Professor Warren's discussion of it. The appearance of this principle in a government bulletin seems to carry with it a sanction of the U.S. Department of Agriculture.

<sup>2</sup> Warren, *op. cit.*, p. 45.

The position of the agricultural economist in this case is not sound. As a matter of fact, as will be shown later, not all the feedstuff is marketable or has an alternative use. But even granting that the position is sound there might still be nothing in this situation to justify a change of principle. The very purpose of cost accounting is to determine whether the farmer does right in feeding his corn to cattle or hogs rather than in selling it to the market. Careful cost accounts are the only possible basis for a reliable decision. Cost of production alone can give rise to the scientific method which counts the cost. In addition to this, unless the feedstuffs grown on the farm where live stock and dairy herds are kept are considered as raw materials of manufacture, the farm is not a single business unit. That practice cannot be a wise one, as shown by those who have written on farm management, that will divorce one part of the farm business from the rest.

It may be said, further, that this practice among farm economists is unwise and is bad accounting, not only because the enterprise is broken up into different units, but because this method does not show the actual condition of the business. A primary aim of cost accounts is to keep costs and profits distinctly separate. If this is not done there arises at once a great possibility for error. For example, if feedstuffs grown on the farm are all calculated at farm prices, which is the regular market price minus the cost of hauling to market, there is a very great danger of overestimating their value. These products while on the farm are ungraded; a large part of them, also, is unsaleable. "On most farms large quantities of cheap rough foods are grown for which there is no market or which cannot be transported profitably to market. Straw from the various grains, corn stover, fodder, ensilage, and grass aftermath, are examples of this class of feedstuffs."<sup>1</sup> And yet if accounts are kept in the manner suggested by farm accountants, all these feedstuffs will go into the records, not only as if they were completely marketable, but also as if they were of first grade. In this case there is obviously an incorrect representation of facts. Such a lack of accuracy makes the accounts deceptive to the farmer himself as well as to anybody else who inspects the record. If a

<sup>1</sup> Boss, *Farm Management*, p. 127.

comparison be made on this basis, between the farm as a business and the store or the factory, the results will manifestly be unfair. In short there is in this method of accounting an element of disguised profits which is to be condemned by all accounting practice. Such records in commercial or industrial business would be said to contain what is called "book profits," which are profits that have never been realized. For the sake of accuracy and conservatism book profits are always to be avoided.

That this method used in farm accounts is a distinct weakness has been clearly shown in the case of the recent Chicago Milk Inquiry. When the farmers' records were produced in evidence before the Milk Commission, they contained this element of disguised profits. The dairy men had included the feed, when grown on their own farm, at market, not even at farm, prices. Since the feedstuffs were at that time held in the market at very high war-time prices and since the farmers themselves admitted that a very large part of the feedstuffs had been greatly damaged by early frosts, the inaccuracy in accounts was clearly revealed, and this inaccuracy was detrimental to the entire case of the milk producers. Under such circumstances the point at issue becomes more than a mere question of theory. It is a matter of very great social importance. In this particular instance the general effect was bad. The evidence of the farmers was discounted and the results of the inquiry were rendered unsatisfactory because there was no way of determining the actual cost of producing milk.

There is, of course, no law either social or economic, that will compel a farmer to feed the products grown on the farm to live stock. As a business manager he is free within a very wide field to do as he will with the raw materials in his business.<sup>1</sup> As a business man, however, the farm manager will be judged by business men on the basis of business principles. He must, therefore, conform to the accepted principles of business or show convincing reason why he refuses to conform. So far in the development of farm accounts the farm has been in the hands of agricultural economists. The responsibility for the introduction of the principle

<sup>1</sup> It should be pointed out, however, that if a large number attempt to market rather than feed these materials the market price would be substantially reduced.

of charging raw materials at farm prices rests with these economists. Their case has not yet been won. They have not shown convincing reason for not conforming with generally accepted business principles. They have sought and they continue to seek the actual cost of producing grain and hay and ensilage in order that they may compare these costs with the market price. There is, therefore, no obstacle which has deterred them from entering upon this very difficult task. Since they are already securing the necessary facts, there is coming to be less and less reason for nonconformity between mercantile and agricultural accounting practice.

3. *The farmer's income.*—A further point in farm accounting practice that deserves careful consideration is the principle used in the analysis of the farm income. A large amount of attention has been given in recent years to this subject by writers on farm management. It is, in fact, the focus of interest for those who discuss this question. The purpose of farm management, it will be recalled, is to secure the greatest continuous net profit. It is only natural, therefore, that attention should be centered upon the size and the character of the income derived from the farm.

The practice in question is the method of apportioning the farm income. This amount represents "the difference between the receipts and the expenses. It is not the net profit to the owner, for the interest on the investment and the value of the family labor have not been deducted."<sup>1</sup> It is, then, a composite return; it is the total amount which is to go to capital and to "unpaid" labor.<sup>2</sup> The difficulty in analyzing this amount rises from the fact that the farmer is very often the owner and manager combined, so that the return on his investment is so closely joined with his own wages of management that it appears at first as a single lump sum.

This farm income has been divided by agricultural accountants into two parts. One represents the interest on the investment and the other is labor income. The distinction between these two terms is made clear by the following definition: "The labor income is the amount of money that the farmer has left after paying all business expenses of the farm and deducting 5 per cent for interest

<sup>1</sup> Thomson, U.S. Dept. Agr., Bureau of Plant Industry, *Circular* 75, p. 6.

<sup>2</sup> Boss, *op. cit.*, p. 19.

on the money invested in the farm business."<sup>1</sup> The method used in dividing this composite farm income into the two general items is illustrated by data secured from certain investigations on New York farms.

AVERAGES OF 670 FARMS IN JEFFERSON  
COUNTY, NEW YORK<sup>2</sup>

Average capital.....	\$9,006
Average receipts.....	1,890
Average business expenses.....	735
Receipts less expenses.....	1,155
Interest at 5 per cent.....	450
Income from unpaid labor.....	705
Value of unpaid labor (except owners).....	96
Labor income.....	609

From the foregoing illustration it is clear that the capital investment is first determined as the basis upon which the division of the farm income is to be made. The difference between the total receipts and the total expenses of carrying on the farm business is thus computed, which in this example is \$1,155. The capital investment of \$9,006 is then multiplied by 5 per cent in order to determine the amount of interest which is to come out of the total farm income. In this example the interest is \$450. This amount being deducted from the farm income of \$1,155 leaves \$705 for the labor of the farmer and his family. The average value of farm labor on these New York farms was calculated to be \$96 a year. The methods used in this calculation are not given. When this amount is subtracted from the income of all unpaid labor, there remains the final item of \$609 for the farmer. "This we call his labor income."<sup>3</sup>

It is on the basis of this return that the farmer is compared with business men in industrial and commercial enterprises. If the basis is unfair or incorrect then the comparison resulting will necessarily be unfair and incorrect. The points at issue in this method are obviously the determination of farm value and of family labor. It is easy enough to check up the general rate of interest which is the third item of importance.

<sup>1</sup> Warren, quoted in Carver, *Readings on Rural Economics*, p. 576.

<sup>2</sup> *Ibid.*, p. 577.

<sup>3</sup> *Ibid.*

This practice among farm accountants has been called into review in order to show that it contains bad accounting principles, and leads to unjustifiable conclusions. The first difficulty with the method here employed is that no device is presented by means of which the investment in land may be determined. The practice in reaching conclusions in regard to equipment on the farm does seem to conform to general mercantile practice. It is arrived at by a record of actual expenditures and careful accounting of depreciation. But farm accountants have been strangely silent as to the methods which they have used in determining land value. There have been general, and more or less vague, assertions that touch upon this subject. "Rises in land values," says one writer, "are not included in farm income."<sup>1</sup> This, however, is not satisfactory. Some valuation was accepted as the basis of calculation. Was this the original cost? Was it less than the original cost? Was it the land value determined by a capitalization of income? Had there been an increase in land values in this district? If so, why? Furthermore, if the land values had risen and if a return of 5 per cent is demanded on this increase, why should it not be included in the accounts? These questions run to the very essence of accounting practice here. Another investigator has declared that "Normal values (not assessed values) were used in all cases. No amount was allowed for increase of value of land unless justified by new buildings, drainage, or other improvements."<sup>2</sup> What are normal values of land? How are they determined? These queries remain unanswered. An investigation was made in 1911 of the farm equipment on Ohio farms. The expert in charge of this investigation declared that "the value given for the bare land represents as accurately as possible the value exclusive of all improvements."<sup>3</sup> This statement of principle is open to the same queries as the former.

One cannot discover from these declarations any clear idea of the methods of valuation which were employed. There is no help, furthermore, to be had from the census reports, from which

<sup>1</sup> Warren, quoted in Carver, *Readings on Rural Economics*, p. 582.

<sup>2</sup> Thompson, "Profits That Farmers Receive," *Annals* (November, 1913), p. 639.

<sup>3</sup> L. W. Ellis, "Study of Farm Equipment in Ohio," U.S. Dept. Agr., Bureau of Plant Industry, *Bulletin* 212, p. 11.

much data has been taken for the calculation of the farm incomes. The working principle in valuation, however, has not been wanting in the field of agricultural economics. However uncertain it may be as to whether this principle has been employed or not by farm-management experts, a clear statement was made some years ago. "The net rent, or the share of the gross returns which under conditions of free competition is credit to land above what is necessary to keep land intact, is the starting-point for figuring the value of a piece of land."<sup>1</sup> This is, to be sure, a definite starting-point, even though the goal remains yet undetermined. Practically the same principle has been repeated by a more recent writer on the farmer's income. "The increase in the value of farm property, in so far as it is real, represents a capitalization of the increase in the value of the farm products. The farmer receives interest on the increase in the shape of greater returns for his crop."<sup>2</sup> No other principle for calculating the values of farm land and hence for determining the amount of investment has been definitely stated. The accounting practice among agricultural economists may, therefore, be fairly judged on the basis of this principle.

That this is a fundamental consideration in farm accounting there can be no question. At present the subject is apparently carefully avoided by writers in this field. Generally the method used by farm-management experts in treating the farm income has been a complete evasion of the whole subject. There is need for immediate consideration by those who are analyzing farm accounts. It does not conform to practice in mercantile and in industrial establishments.

If the principle of valuation stated above is now applied to the method used by farm accounts, to determine the labor income, the fallacy in it will become clear. The primary difficulty is that it is impossible to know, without further analysis, whether the accepted or assumed capital investment is high or low. Nor is there any principle yet pronounced by farm experts bearing on this question. If the capital investment has been made too high it is obvious that

<sup>1</sup> Taylor, *Agricultural Economics*, p. 188.

<sup>2</sup> Goldenweiser, *American Economic Review*, VI, 45.

the labor income will necessarily be too low. If, on the other hand, the farm investment has been made too low the labor income will in consequence be too high. This is due to the fact that the labor income consists of what remains after a return on the investment has been deducted. It is also evident that if the principle of determining land values, which has been stated, is used the capital investment moves up with the increase in price of farm products. Whether this rise in value is faster or slower than the increase in prices is not yet known. The probability is, however, that the increased valuation anticipates the rise in value of farm products and, therefore, permits a large speculative element to enter land valuation. If it be assumed, however, that the rise in value of farm land keeps step with the increase in price of farm products then *it will not be possible for labor income ever to increase*. This is obvious since the increased return on investment will necessarily absorb all increased returns on farm products.

There is some evidence to show that such has been the case in the United States during recent years. One writer on the subject of the farmer's labor income has declared that there appears to be some kind of "equalizing influence" at work on these labor incomes. His conclusion is, that "this equalizing agency must be the tendency for changes in income-producing power to reflect themselves in changes in land values. Labor incomes tend through the work of economic law to a level, and the variations in productivity in the different sections will be found in the differences in land values. Thus, it is not the wage-earner, the manager, nor the enterpriser who benefits by the social changes, but it is the owner of real estate."<sup>1</sup> There seems to be an element almost of naïve surprise in the manner in which this conclusion is stated. But a little consideration shows that such a consequence must inevitably follow from the method of determining the farmer's labor income. Increased value of land under the principle of valuation stated above absorbs all the increased returns from farm products. The capital investment, therefore, is the item that changes with an increase in returns, and not the labor income. As a matter of fact, if this principle of valuation be carried to its logical conclusion, there can

<sup>1</sup> P. L. Vogt, "The Farmer's Labor Income," *American Economic Review*, VI, 813.

be no labor income for the farmer which is to be attributed to his ability as a manager, that is, there can be no wages of management. The simple reason for this is that he immediately capitalizes all of his increased returns into the value of his farm. Then, by calculating 5 per cent on this increased capitalized value, he arrives at the same point for his labor income that he had before.

There is, of course, no reason for alarm, even though the owner of the real estate, that is the farmer, alone benefits by the so-called social changes, when one remembers that two-thirds of the owners of farms are also managers, enterprisers, and farm laborers. It cannot be any cause for dismay to learn that a farmer has become wealthy, not because he is a farm manager, but because he owns a farm. The ultimate consequence is the same: the man is well to do.

A further weakness in this method of dividing the farm income appears when the attempt is made to compare conditions on the farm with those in the city. However unwise such "odious comparisons" may be, they are nevertheless constantly made. A very great deal of discontent has undoubtedly arisen from such comparisons. Since they will be made whether wise or unwise, there is here a further argument, if any is needed, for a fair and accurate basis of accounting. It has been shown by certain investigators that the labor income on the farm has not increased substantially since 1900.<sup>1</sup> "The labor income of the farmer," it is said, "appears to be subject to the same laws as the labor income of those in other industrial fields."<sup>2</sup> This question is discussed from the point of view of the general social situation; and the agricultural accountants are sowing the seeds of a social unrest that the inherent facts of the situation do not appear to warrant. Under the principle of valuation which has been cited, it is manifestly impossible for the farmer's labor income to increase. Here, once more, is the old problem of one trying to lift himself by his own boot-straps. The greater the return from the farm, with the capitalization at the prevailing rate of interest, the greater will be the value of the farm investment. If, in turn, this increased farm investment must first receive from the annual farm income its regular return of 5 per cent, there is and can be no increase left for the farmer's labor income. Such a system

<sup>1</sup>*Ibid.*, pp. 809-20.

<sup>2</sup>*Ibid.*, p. 813.

of accounting permits the farmer to be a poverty-stricken farm laborer at the same time that he is becoming a wealthy farm owner. There is certainly some fundamental difficulty with an accounting system that permits such an anomalous condition.

It is to be pointed out, further, that such a system cannot give a fair accounting to the tremendous increase in land values that has taken place in recent years. It has been calculated that the average annual increase in value of farm property between 1900 and 1910 in the United States was \$2,055,000,000. This estimate gives an annual increase of \$323 for each farm in the United States, of which about \$242 is estimated to be the increase in the value of land itself.<sup>1</sup> These figures from the census report show that the farm has been receiving every year an increase in value of \$242 on the average farm. During the same period his labor income is said not to have increased substantially. In the Middle West, where farm lands have increased very rapidly during recent years, the statistical abstract shows the following estimates:<sup>2</sup>

State	1900	1910
Illinois land value. . . . .	\$1,514,113,970	\$3,090,411,148
Indiana land value. . . . .	687,633,400	1,328,196,545
Iowa land value. . . . .	1,256,757,980	2,801,973,573

This increase of farm value has been in farm property alone and equals an increase of 109 per cent in a ten-year period. A part of this increase is no doubt pure speculation and was never paid. It is what has been called "the farmer's share in the increase of the nation's wealth."<sup>3</sup> The system of accounting by farm experts does not separate the speculative element from the real value. As a matter of fact the method used permits the speculative element free access to the capital investment upon which a 5 per cent return is demanded before the labor income is determined. It follows that this method of accounting opens a way to an overcapitalization of the farm business that has been so greatly deplored in other kinds of business. The farm is thus permitted to demand a 5 per cent return on inflated farm prices.

<sup>1</sup> Goldenweiser, *American Economic Review*, VI, 45.

<sup>2</sup> *Statistical Abstract*, p. 127.

<sup>3</sup> Goldenweiser, *op. cit.*

There is also a situation which developed from this method of accounting that makes a comparison with other kinds of business unfair. It has been said frequently by farm experts that many farmers are making no labor income whatsoever. Some are in fact receiving a "minus labor income." "In one investigation one farmer out of every three paid for the privilege of farming."<sup>1</sup> It has also been declared that a very large percentage of American farmers are now living on the interest of their investment and that they "do not receive anything for their own wages."<sup>2</sup> It would appear that a careful analysis of this method of accounting might explain such a condition as a minus labor income. In other kinds of business it would mean simply that the capitalization was too large or that the management was not efficient. If land is held at a speculative value, which anticipates all possible increases for the next fifty years, and if on the basis of these inflated values there is first deducted a 5 per cent return, it stands to reason that the labor income item must suffer. There seems to be no valid reason why the farmer's labor income should not be deducted along with other labor expenses before the return on investment is determined.

It has been said that the capital investment on many farms is too small an item to be left for final consideration, and that since everyone can know what money is worth through the prevailing interest rate, but cannot assign a value to the farm manager's efforts, therefore, the return investment at the prevailing rate of interest should first be deducted in order to isolate the labor income to the farm manager.<sup>3</sup> At the same time it is admitted that "the term 'labor income' is very readily understood by farmers because it is directly comparable with the hired man's wages when the hired man gets a house, a garden, and some farm products."<sup>4</sup> The logic of this argument is not clear. There is a prevailing rate of interest. There is also the readily understood term "labor income." So far as definiteness is concerned one may as easily be used as the other.

Further defense of the accounting practice has been made. An instance was cited of a farm valued at \$2,000 with an annual farm

<sup>1</sup> U.S. Dept. Agr., *Bulletin 41*, p. 11.

<sup>2</sup> A. G. Spillman, quoted in Carver, *Readings on Rural Economics*, p. 635.

<sup>3</sup> Carver, *op. cit.*, p. 577.

<sup>4</sup> *Ibid.*

income of \$600. It was assumed that the average hired man's wages was \$400. This left a margin of \$200 for a return on investment. This sum would mean a return of 10 per cent on \$2,000. If, in contrast, a farmer had a capital investment of \$20,000 and received \$2,000 above expenses, he would have left, after deducting \$400 for his labor, a return on his investment of 8 per cent. It is difficult to see why the smallness of the capital item in the first case would be a misrepresentation of facts. After all, the returns on capital should be what the manager can make out of that capital in any given enterprise. If he works for another man his labor may bring him only what is paid to other workmen, but as a controller of capital and as a manager of the farm business he makes, by a judicious use of the capital, a high return. This return may as readily be accredited to capital as to labor. It will, in fact, contain an element of wages of management, which probably can be identified only with very great difficulty. The method would, however, avoid the untenable position of fixing the farmer's labor income at a definite figure, in disregard of the sum total of his returns.

If it be recalled that one distinction between the farm and other kinds of business was said to be the fact that whether hazards were greater in the former case than in the latter, it may be argued further that this fact makes the method used by farm accountants even more unsatisfactory. Since factory methods are more standardized than farm methods it should follow that the difference in returns between factories would depend upon the degree of effectiveness in management. On the farm differences in returns could depend more directly on the uncontrollable weather conditions. In the latter case managerial ability might be equal under a condition of greatly varied returns. In the former case this could not be true. It could be argued, therefore, that farm accounts should attribute the variable factors in returns to the farm plant rather than to the manager.

The relationship between the farm as a productive unit and the farm as a home must be noted in the light of this principle. There are in this relationship certain intangible values which have found monetary expression in the value of the farm. Under the present system of farm accounts it is possible to demand a 5 per cent

return on these intangible home values which have not increased the productivity of the land. It is the duty of the farm experts to devise a method of isolating these items. So far this has not been done. The present method only obscures the issue.

Another question arises under this method of accounting for the various elements in the farm income. How does the tenant fare? In theory the tenant cannot afford, economically speaking, to pay except for the productive elements on the farm. To be sure, he must live, as every farmer must live, on or near his farm. He expects, however, a return on these things for which he has bargained. What are the facts in this case? In the United States one farm out of every three is rented (37 per cent in 1910). There are in general two methods of renting, one is on a share basis and the other on a cash basis. The essential difference in these two methods of renting is the difference in risk. In the former case the landowner shares with the tenant all the weather and other hazards in crop production. In the latter system the tenant assumes all these risks and contracts to pay a definite lump sum.

As might be expected the returns to the landowner are different under these two systems. In general the return to the tenant in both cases is relatively larger than the returns to the landowners. "We shall see later that the tenants in this area make a considerably larger labor income than the owners."<sup>1</sup> From another survey it was concluded that for the year 1911 the tenants received on 124 farms 7.3 per cent on their invested capital. An investigation on certain Iowa farms showed a return to the landowners of 2.3 per cent on a cash-renting basis and 4.28 per cent on a share-renting basis.<sup>2</sup> Another investigation of the conditions on New York farms has led to the conclusion that "on any given capital the tenants are making more money than the owners."<sup>3</sup>

An explanation for the higher return to the tenant has been offered by the farm experts. It is, in brief, that the tenant has a relatively larger capital outlay than the owner. That is to say that

<sup>1</sup> "Practice in Chester County, Pennsylvania," *Farm Management*, U.S. Dept. Agr., January, 1916.

<sup>2</sup> Iowa Experiment Station, *Bulletin 159*, pp. 166-69.

<sup>3</sup> Warren, *Farm Management*, p. 312.

with a certain amount of capital he can control a larger amount of land.<sup>1</sup> From the survey of the method which has been used in analyzing the farm income it will appear, however, that another explanation can be found. Since a 5 per cent return on the farm value is first deducted before the farmer's labor income is determined where the farmer is likewise the farm manager, it is clear that a 5 per cent return on any land valuation, that is less than the total farm income, is assured. When the landowner, however, must bargain with a prospective tenant it appears that this 5 per cent return on the former land valuation cannot be assured. It would seem that the obvious explanation is that a part of the valuation is not derived from the present productivity of the land, but from a speculative, that is an inflated valuation. Conclusions that have been drawn from certain investigations lend force to this view. "If most Iowa farm owners," it is said, "believed that land would not advance in price, they would sell at the market price and put the money at interest. They could get 4.10 per cent on time deposits, or 5.5 per cent on farm mortgages, at a time when cash rent is 2.3 per cent and share rent is 4.28 per cent. At present the landowners believe the advance in price of land will make up for the difference between cash rents and the time deposit rate, or between share rent and the farm-mortgage rate of interest. They prefer to hold their land on this speculative basis."<sup>2</sup> It is plausible to assume that this difference in return to farm owners and tenants is really due to an overvaluation of farm land; but if this is true in the case of tenants it is obvious that where landowners are also farm managers they are demanding a 5 per cent return on all speculative value.

#### IV. CONCLUSION

The importance of the so-called essential differences between the farm as a business and the factory or the store makes it worth while to attract particular attention to these points. It is not merely a question of method or of theory. Far-reaching economic and social influences are bound up in this whole question. Both sides cannot

<sup>1</sup> Thompson, *Annals*, L, 180.

<sup>2</sup> Iowa Experiment Station, *Bulletin* 159, pp. 166-69.

be right. Today the weight of opinion and of practice is on the side of mercantile economists. Nonconformity in principle and method by agricultural economists must be justified by a convincing argument. Neither expediency nor difficulty is a sufficient justification. In order that the main points contained in this discussion may be easily surveyed they are here assembled and numbered.

1. This discussion has called attention, in the first place, to the recent development of a new view of agriculture. Farming has ceased to be a mere matter of production. The farmer is no longer a mere agricultural scientist. The farm is now considered a business and a farmer now becomes a business manager. This means that farming takes its place among other kinds of business and that the farmer joins the ranks of business men. Under this condition the farm management must stand the tests applied to other kinds of business. The farmer also must meet his responsibilities as a business man. In other words, farming is now to be compared with mercantile and industrial enterprises.

2. It has been shown also that the leaders in the new movement of farm management have come to their task somewhat poorly equipped in the matter of business training. They have been acquainted with the farm as a productive unit, they have studied the principles of scientific farming, and some of them have examined certain of the chief marketing problems connected with farm products. These men have borrowed very largely from mercantile economics; their aim has been to apply "business principles" to the farm. There is, then, no independent system for the farm manager; there has been only a modification or adaptation of the principles and methods used in mercantile establishments. It is, of course, right and proper to take advantage of the age-old experience of business men. This is exactly what the leaders in the farm-management movement should have done. Their chief borrowings have been in matters of terminology and forms for records and accounts. A large body of principles has also been taken over.

3. The main portion of this discussion, however, has had to do with certain so-called essential differences between the farm as a

business and other kinds of business. Claims have been made by the agricultural economists that there are certain mercantile principles that will not work on the farm. One difference that has been discussed in detail is the relationship of the home and the farm. A second difference is the principle employed by agricultural economists in caring for the raw materials, i.e., for feedstuffs that are grown on the farm and fed to live stock. A third main difference, and one that is far more fundamental in character because it underlies the other two, is the principle used in analyzing the farm income. This becomes a matter of special significance when it is made the basis for conclusions on general social questions. It is contended here that on these three points the farm experts have been in error. They have rejected the principles that have developed in mercantile business and they have used in their place the ones which they have felt would apply to their own particular problems. In doing so, however, they have opened the way for a very unfortunate misrepresentation of facts.

It is especially unfortunate because upon these facts have been based certain conclusions which will stand or fall according to the soundness or unsoundness of the principles employed. As an example of these conclusions the following quotations are given: "On the whole the income of the farmers in this country even when we include as a part of the income those things consumed on the farm where they are produced is certainly not more than sufficient to pay 5 per cent on the investment and ordinary farm wages for the labor they do, and it is probably considerably less than this."<sup>1</sup> The tendency appears to be "that social change reflects itself in land values rather than in labor incomes."<sup>2</sup> "Many farmers would be better off financially if they sold their farms and loaned their money at 5 per cent and hired themselves out at current wages."<sup>3</sup> "In the marked disparity between the rate-of-wages increase and land-value increase, may be found the basis for some

<sup>1</sup> Spillman, "The Farmer's Income" in Carver, *Readings on Rural Economics*, p. 635.

<sup>2</sup> P. L. Vogt, "The Farmer's Labor Income," *American Economic Review*, VI, 814.

<sup>3</sup> Thompson, "Farm Bookkeeping," *Farmer's Bulletin* 511, p. 22.

of the serious problems confronting communities at the present time."<sup>1</sup>

It is against such conclusions as these that the present discussion is aimed. There may be here the basis for widespread social discontent. If farm bookkeeping constantly shows returns that are discouraging to the farmer, the effect is of great concern to all people. There is no question about the essential importance of farming as a business; it must go on. There can be no differences of opinion about the question of fair return to the farmer. There may be serious question, however, about the method of accounting that misrepresents conditions. It is unfair to say that many farmers would be better off financially if they sold their farms and loaned their money and worked for their neighbors, when the records upon which the conclusion is founded are based upon a system of accounting that claimed the prevailing rate of interest on inflated, speculative land values. It certainly cannot be disputed that the sum total returns from the farm are all the farmer can count upon for his subsistence and his savings. But these total returns are of two sorts, one tangible, the other intangible. Both of these must be taken into consideration.

There seems also to be little doubt that the farm experts have done work that is of very great value in toning up the entire farm business. They should be open to criticism on their methods, however, as all other business experts are. It is only fair to check them up by their own figures. Under present conditions they cannot be consistent with themselves. It is impossible, for example, to make the point that there is developing a serious problem in farm communities at the present time, because of the marked difference between rate-of-wage increase and land-value increase, when

<sup>1</sup> Vogt, *op. cit.*, p. 820.

For the good moral effect which may result from it, the following quotation is given which summarizes returns on mercantile and industrial enterprises. These should be compared with the admitted returns on the average American farms. "Leaving out of consideration the banking, railroading, and public utilities corporations, referring only to those that have to do with trade and industry, we find that there are about 250,000 business corporations in the country. The astonishing thing is that of those over 100,000 have no net income whatever. In addition, 90,000 make less than \$5,000 a year, while the 60,000 remaining, the more successful ones, make \$5,000 a year and over" (E. N. Hurley, *Printer's Ink* [December 9, 1915], p. 97).

the system of farm accounting does not permit the labor income to increase, and when farm investigations lead to the conclusion that the farming population of the United States, an aggregate of thirty million people, has a larger average income per family than any other equally homogeneous group of individuals of anything like the same size anywhere else in the world.<sup>1</sup> Inconsistencies of this sort rise from erroneous principles. Such errors should be speedily corrected.

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<sup>1</sup> Goldenweiser, "The Farmer's Income," *American Economic Review*, VI, 48.